

I claim:

1. A pharmaceutical composition comprising:
a stabilized botulinum toxin; and
at least one enhancing agent for facilitating transdermal delivery
of the botulinum toxin into a human patient by enhancing the
permeability of the patient's skin.
2. The composition of claim 1, wherein the botulinum toxin is
selected from the group consisting of botulinum toxin types A,
B, C₁, D, E, F and G.
3. The composition of claim 1, wherein the botulinum toxin is
botulinum toxin type A.
4. The composition of claim 1, wherein the botulinum toxin is a
purified botulinum toxin.
5. The composition of claim 1, wherein the composition comprises
between about 1 units to about 20,000 units of botulinum
toxin.
6. The composition of claim 1, wherein the composition comprises
an amount of botulinum toxin to achieve a therapeutic effect
lasting between 1 month and 5 years.
7. The composition of claim 1, wherein the enhancing agent is an
alcohol.
8. The composition of claim 7, wherein the alcohol is a polyalcohol.

9. The composition of claim 1, wherein the enhancing agent comprises a transfersome.
10. The composition of claim 1, wherein the composition comprises a plurality of enhancing agents.
11. A pharmaceutical composition in a transdermal patch, the pharmaceutical composition comprising:
 - a stabilized botulinum toxin that permeates through a human patient's skin without permeating in significant amount through a blood vessel when the botulinum toxin interacts with an enhancing agent provided in the transdermal patch to cause a therapeutic effect of a disorder associated with exocytosis of a molecule from a cell.
12. The composition of claim 11, wherein the botulinum toxin is provided in a dry state in the transdermal patch before the patch is applied to the patient's skin.
13. The composition of claim 11, wherein the botulinum toxin is botulinum toxin type A.
14. The composition of claim 11, wherein the botulinum toxin is mixed with the enhancing agent after the transdermal patch is applied to the patient's skin.
15. The composition of claim 14, wherein the botulinum toxin mixes with an enhancing agent that is applied to the patient's skin before the transdermal patch is applied to the patient's skin.

16. A transdermal patch, comprising
a pharmaceutical composition, which comprises:
 - a stabilized botulinum toxin; and
 - an enhancing agent that facilitates transdermal administration
of the botulinum toxin in a bioactive form to a subdermal
target site of a human patient without being administered
to the patient's circulatory system; and
 - an adhesive disposed on one side of the transdermal patch to
removably secure the patch to the patient's skin.
17. The transdermal patch of claim 16, wherein the adhesive is
disposed around a depot containing the pharmaceutical
composition.
18. The transdermal patch of claim 16, further comprising a plurality
of needles extending from one side of the patch that is applied
to the skin, wherein the needles extend from the patch to
project through the stratum corneum of the skin without
rupturing a blood vessel.
19. The transdermal patch of claim 18, wherein the botulinum toxin is
provided in a depot in the patch so that pressure applied to
the patch causes botulinum toxin to be directed through the
needles and under the stratum corneum.
20. The transdermal patch of claim 16, wherein the botulinum toxin is
provided in a dry state in a plurality of wells, each of the wells
covered by a membrane that is dissolvable with a fluid, and
wherein the enhancing agent mixes with the botulinum toxin
as the membrane over a well dissolves so that the absorption
of the botulinum toxin is enhanced.

21. The transdermal patch of claim 16, wherein the botulinum toxin is botulinum toxin type A.
22. A method of reducing neurotransmitter release in a subdermal structure of a patient, the method comprising the steps of:
 - (a) non-chemically disrupting the stratum corneum of the patient's skin to reduce impermeability of the stratum corneum; and
 - (b) applying botulinum toxin to the skin of the patient in an area that has had the stratum corneum disrupted in step (a).
23. The method of claim 22, wherein the stratum corneum is disrupted by abrasively removing the stratum corneum.
24. The method of claim 22, wherein the stratum corneum is disrupted by applying an adhesive material to the patient's skin, and removing the adhesive material applied thereto.
25. The method of claim 22, wherein the stratum corneum is disrupted by applying ultrasound at a frequency between 20 kHz and less than 10 MHz at an intensity that does not permanently damage the patient's skin.
26. The method of claim 22, wherein the stratum corneum is disrupted by passing electrical current from a first point on the patient's skin to a second point on the patient's skin.
27. The method of claim 26, wherein the electrical current is passed to create a plurality of pores in the stratum corneum to enhance passage of botulinum toxin to the subdermal structures.

28. The method of claim 22, wherein the botulinum toxin is selected from a group of botulinum toxins consisting of types A, B, C, D, E, F, and G.
29. The method of claim 22, wherein the botulinum toxin is applied in a pharmaceutical composition comprising an enhancing agent for enhancing the delivery of the botulinum toxin through the skin.
30. The method of claim 22, wherein the botulinum toxin is incorporated into a transfersome.
31. A method of relieving pain in a patient caused by a spastic muscle, the method comprising the steps of:
 - (a) applying ultrasound at a frequency between about 10 kHz and 1 MHz to the patient's skin overlying the spastic muscle; and
 - (b) applying botulinum toxin to the patient's skin that has received the ultrasound in step (a).
32. The method of claim 31, further comprising a step of abrasively removing portions of the stratum corneum of the patient's skin that received the ultrasound.
33. The method of claim 31, wherein the botulinum toxin is botulinum toxin type A.
34. The method of claim 31, wherein the botulinum toxin is administered in a composition comprising an enhancing agent that facilitates penetration of the botulinum toxin through the patient's skin.

35. The method of claim 31, wherein the botulinum toxin is applied in a transdermal patch applied to the patient's skin.